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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,160	03/23/2006	Shunpei Yamazaki	740756-2936	6623
22204	7590	10/25/2007		
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			EXAMINER LEE, CALVIN	
			ART UNIT 2818	PAPER NUMBER
			MAIL DATE 10/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,160

Applicant(s)

YAMAZAKI, SHUNPEI

Examiner

Calvin Lee

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-100 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/23/06, 6/30/06 & 2/8/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

OFFICE ACTION

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to one having skills in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention made.

2. Claims 1-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kurimoto* (US 5,405,787) or *Kudo* (US 6,420,261), in view of *APA* (Applicant's Prior Art).

Kurimoto discloses a method for manufacturing a semiconductor device, comprising of:

- forming a first insulating film by discharging a composition including an insulator;
- forming a second insulating film **10** over the first insulating film **2** [Fig. 14(a)];
- forming a mask pattern **11** on the second insulating film [Fig. 14(b)]; and
- forming an opening by etching the first insulating film **2** by using the second insulating film **10** as a mask [Fig. 14(c) and col. 15, ln.7]

Kudo discloses a method for manufacturing a semiconductor device, comprising of:

- forming a first insulating film by discharging a composition including an insulator;
- forming a second insulating film **32** over the first insulating film **31** [Fig. 3F];
- forming a mask pattern **33** on the second insulating film [Fig. 3J]; and
- forming an opening by etching the first insulating film **31** by using the second insulating film **32** as a mask [Fig. 3K and col. 7, ln.47].

Neither *Kurimoto* nor *Kudo* suggests forming a mask pattern by performing light-exposure. *APA* discloses forming a mask pattern by performing light-exposure and development.

It would have been obvious to one having skills in the art to utilize the teaching of *APA*, and thus arrive at the claimed invention. The motivation to do so would have been to form a small-size mask been etched using a well-known light-exposure technique.

3. Claims 1-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over *APA* (Applicant's Prior Art) in view of *Kikuchi et al* (JP 61-171.151), *Hirabayashi* (JP 04-196.133) or *Iwabuchi et al* (JP 2006-040.940).

APA discloses a method for manufacturing a semiconductor device, comprising at least the step of forming a resist (by performing light-exposure and development) on/over an insulating film, which has been formed by spin coating a composition. *APA* further discloses forming an opening by selectively etching the insulating film by using the resist as a mask, not by etching "a first insulating film by using a second insulating film as a mask." Nevertheless, such multi-layer etching is known in the semiconductor processing art as evidenced by *Kikuchi et al* disclosing to form an opening 10 by etching a first insulating film 4 by using a second insulating film 5 as a mask [Figs. 1(c) & 2(a)]; *Hirabayashi* disclosing to form an opening by etching a first insulating film 2 by using a second insulating film 21 as a mask [Figs. 1E & 1F]; *Iwabuchi et al* disclosing to form an opening 14a by etching a first insulating film 14 by using a second insulating film 15 as a mask [Figs. 1(a) & 1(b)].

It would have been obvious to one having skills in the art to utilize the teaching of *Kikuchi et al*, *Hirabayashi* or *Iwabuchi et al*, and thus arrive at the claimed invention. The motivation to do so would have been to form ohmic contacts thru multi-dielector device.

Contact Information

4. Any inquiry concerning this communication from the Examiner should be directed to *Calvin Lee* at (571) 272-1896 on Mondays thru Thursdays 6:30-4:30PM. If attempts to reach the examiner by telephone are unsuccessful, Art Unit 2818's Supervisory Patent Examiner *Steven Loke* can be reached at (571) 272-1657. The fax phone number for the organization (where this application is assigned to) is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAG or Public PAIR. For more information about the PAIR system, see <http://pair-direct.uspto.gov> Should you have questions on access to the PAG system, contact the Electronic Business Center (EBC) at 1-866-217-9197.

Dated: October 10, 2007



Calvin Lee